

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P195015

Luminaire Tested: **NAV-AF-03-D-UNV-5WQ-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195015
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-5WQ-7060
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18845 lumens
Efficiency: N/A
Efficacy: 113.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G3

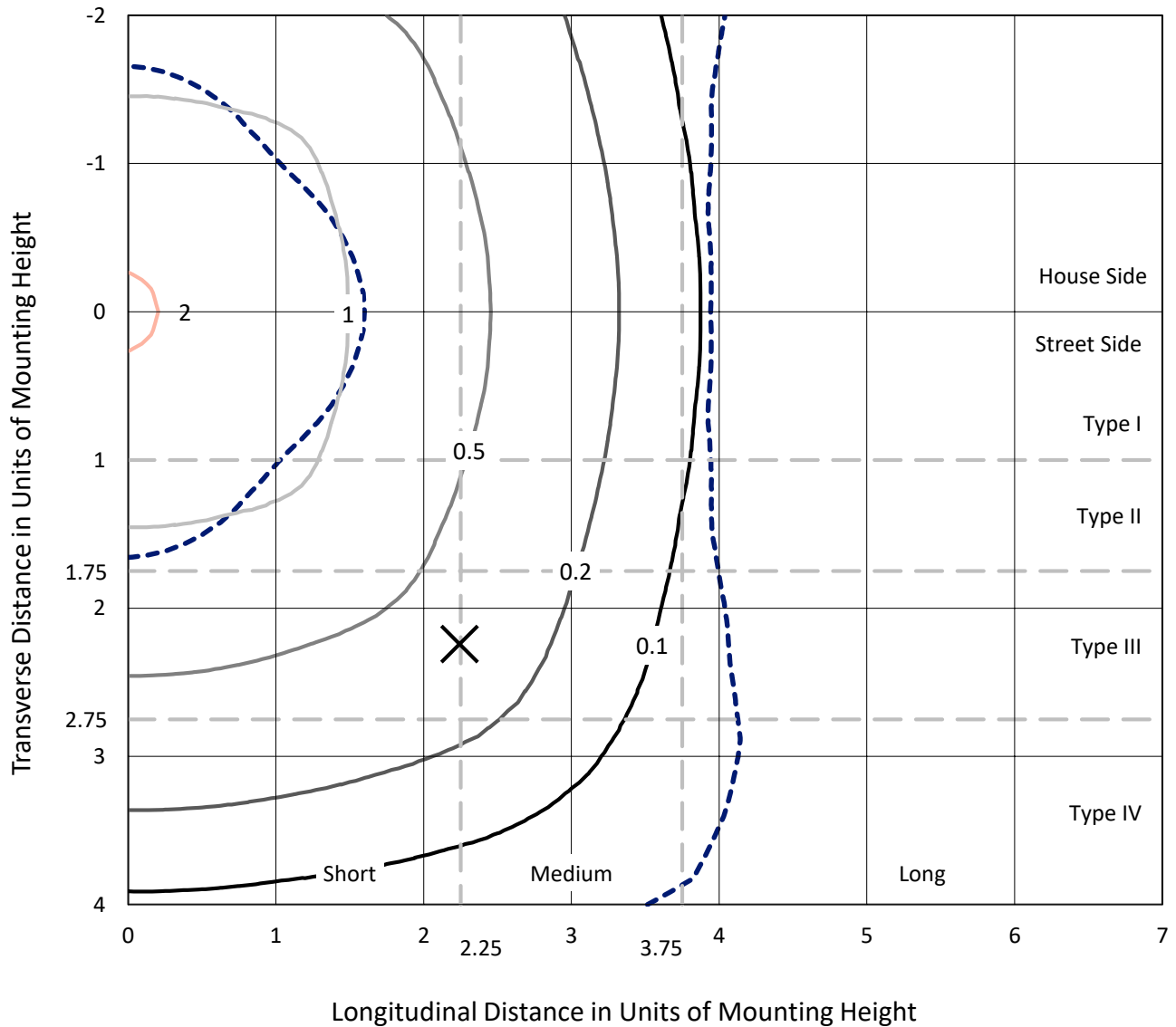
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

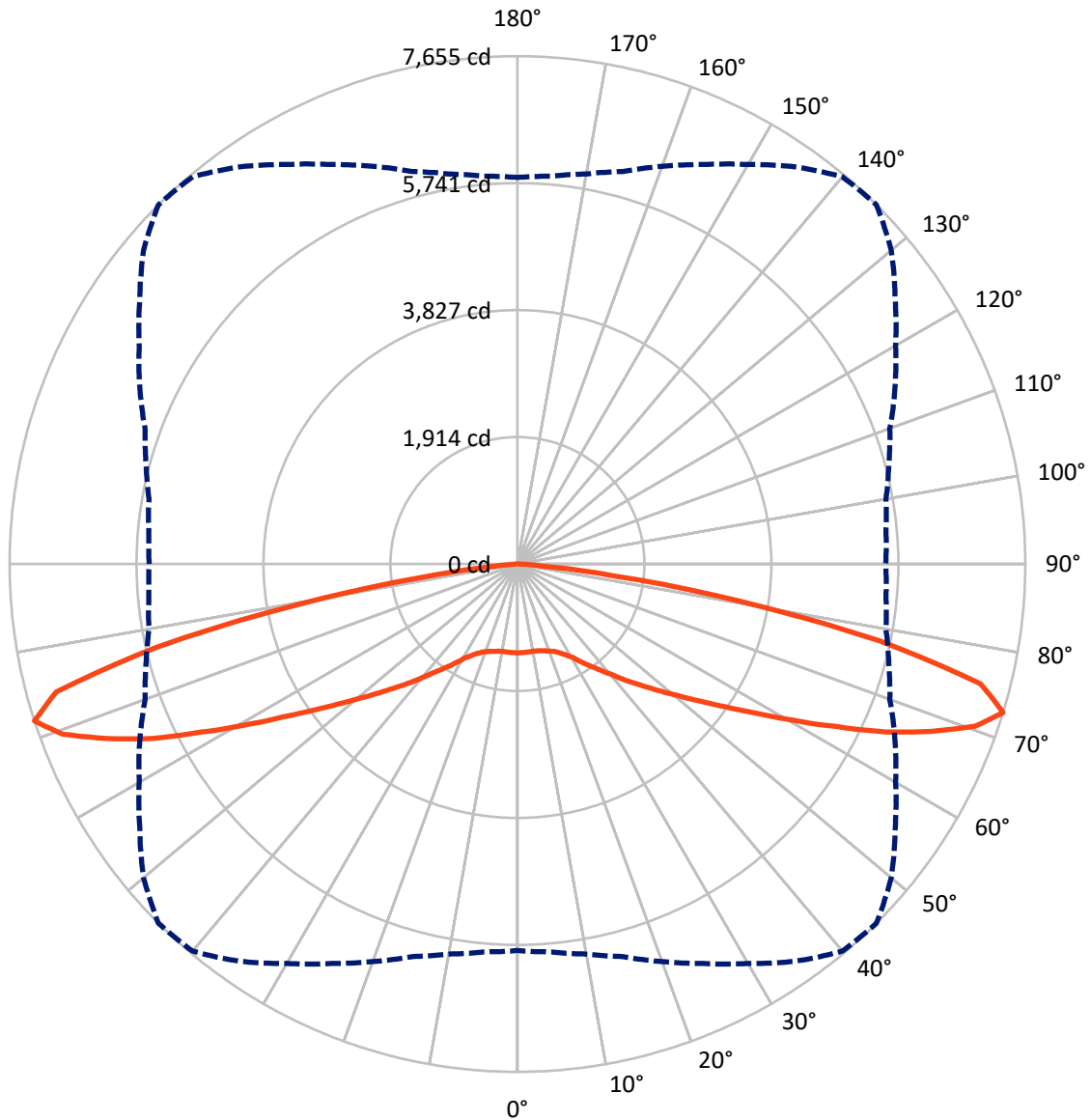


Based on 25 foot mounting height. Maximum calculated value = 2.1 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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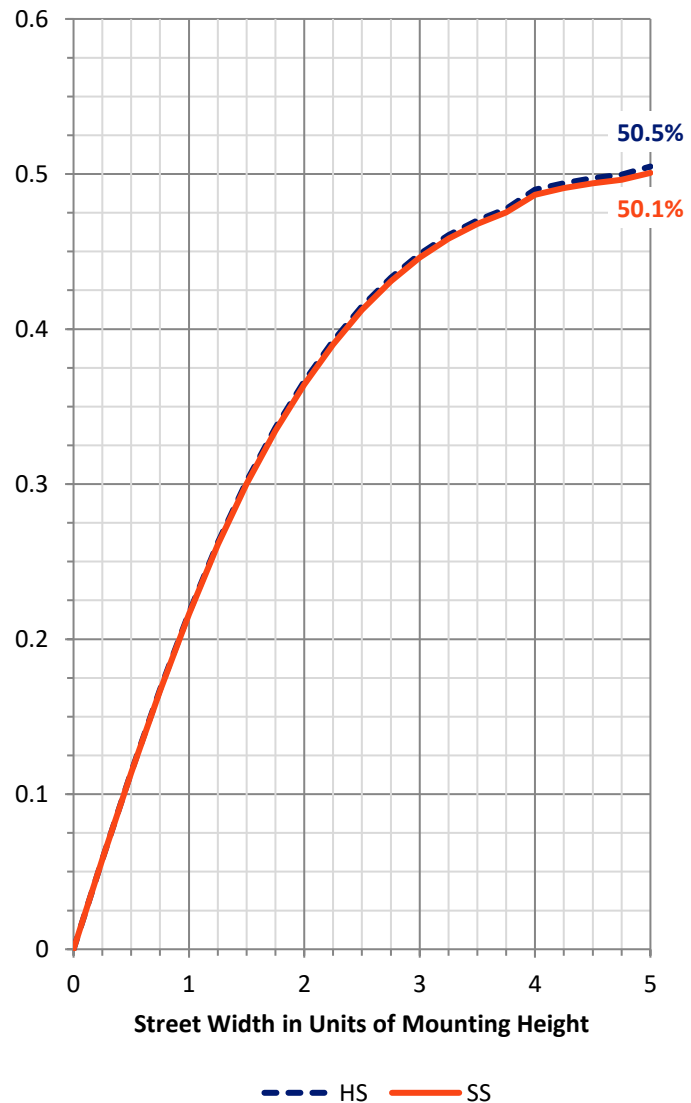
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9422.5	0.0	9422.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	9422.5	0.0	9422.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	18845.0	0.0	18845.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.9	0.7
10°-20°	387.0	2.1
20°-30°	698.7	3.7
30°-40°	1191.7	6.3
40°-50°	2028.9	10.8
50°-60°	3265.2	17.3
60°-70°	5430.2	28.8
70°-80°	5253.1	27.9
80°-90°	462.3	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	18845.0	100.0
0°-180°	18845.0	100.0



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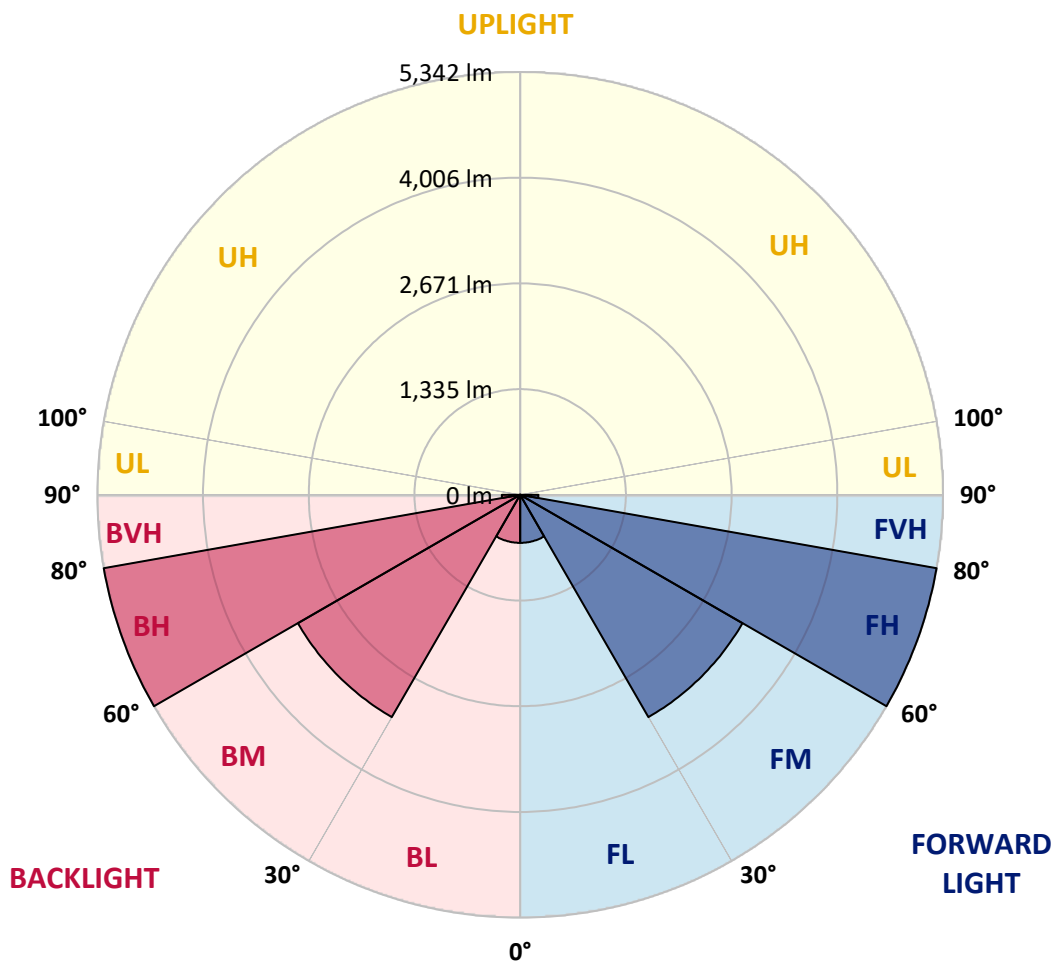
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	606.8	3.2			
FM	(30°-60°)	3242.9	17.2			
FH	(60°-80°)	5341.6	28.3			G3/7500
FVH	(80°-90°)	231.2	1.2			G3/500
BL	(0°-30°)	606.8	3.2	B2/1000		
BM	(30°-60°)	3242.9	17.2	B3/5000		
BH	(60°-80°)	5341.6	28.3	B5		G3/7500
BVH	(80°-90°)	231.2	1.2			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1339.7	1339.7	1339.7	1339.7	1339.7	1339.7	1339.7	1339.7	1339.7	1339.7	1339.7
2.5°	1350.2	1350.2	1351.3	1350.2	1347.9	1346.7	1343.2	1340.9	1338.6	1337.4	1335.1
5°	1351.3	1351.3	1352.5	1351.3	1349.0	1346.7	1344.4	1340.9	1338.6	1336.3	1335.1
7.5°	1356.0	1357.1	1358.3	1357.1	1352.5	1350.2	1346.7	1343.2	1338.6	1336.3	1333.9
10°	1365.3	1365.3	1365.3	1364.1	1360.6	1356.0	1351.3	1347.9	1342.1	1336.3	1332.8
12.5°	1372.2	1373.4	1373.4	1371.1	1366.4	1360.6	1356.0	1352.5	1347.9	1343.2	1339.7
15°	1382.7	1382.7	1381.5	1376.9	1369.9	1365.3	1362.9	1361.8	1360.6	1358.3	1354.8
17.5°	1403.5	1402.4	1398.9	1391.9	1383.8	1380.3	1378.0	1378.0	1378.0	1376.9	1374.5
20°	1433.7	1433.7	1429.1	1417.5	1410.5	1407.0	1403.5	1403.5	1403.5	1400.1	1396.6
22.5°	1482.4	1483.6	1476.6	1462.7	1453.4	1446.5	1441.8	1438.3	1434.9	1432.5	1426.7
25°	1548.5	1547.4	1539.2	1521.8	1514.9	1507.9	1498.7	1492.9	1488.2	1484.7	1477.8
27.5°	1618.1	1617.0	1607.7	1592.6	1588.0	1577.5	1570.6	1562.4	1556.6	1550.8	1543.9
30°	1707.4	1701.6	1694.7	1683.1	1680.8	1672.6	1663.4	1651.8	1642.5	1633.2	1625.1
32.5°	1787.5	1787.5	1777.0	1771.2	1775.9	1772.4	1773.6	1766.6	1760.8	1757.3	1749.2
35°	1898.8	1898.8	1894.2	1887.2	1888.4	1880.3	1879.1	1880.3	1884.9	1884.9	1875.6
37.5°	2047.3	2049.6	2034.5	2032.2	2026.4	2014.8	2009.0	2011.3	2021.8	2027.6	2014.8
40°	2231.7	2236.4	2231.7	2216.7	2209.7	2190.0	2178.4	2178.4	2186.5	2192.3	2187.7
42.5°	2413.8	2422.0	2413.8	2402.2	2396.4	2381.4	2375.6	2380.2	2390.6	2397.6	2390.6
45°	2616.8	2622.6	2612.2	2598.3	2591.3	2583.2	2579.7	2583.2	2594.8	2601.8	2599.4
47.5°	2816.3	2824.5	2811.7	2805.9	2805.9	2797.8	2807.1	2816.3	2826.8	2843.0	2836.1
50°	3011.2	3021.7	3013.5	3014.7	3024.0	3039.1	3056.5	3075.0	3093.6	3111.0	3113.3
52.5°	3185.2	3201.5	3202.6	3223.5	3252.5	3275.7	3324.4	3365.0	3409.1	3424.2	3417.2
55°	3368.5	3390.5	3419.5	3452.0	3498.4	3546.0	3628.3	3701.4	3759.4	3795.3	3789.5
57.5°	3630.6	3652.7	3682.8	3736.2	3805.8	3870.7	3983.3	4096.9	4185.1	4239.6	4212.9
60°	3970.5	3993.7	4033.1	4090.0	4180.4	4268.6	4422.9	4586.4	4723.3	4785.9	4737.2
62.5°	4420.6	4442.6	4468.1	4543.5	4644.4	4758.1	4951.8	5161.8	5335.8	5396.1	5327.6
65°	5062.0	5088.7	5096.8	5158.3	5256.9	5362.4	5571.2	5807.9	6006.2	6104.8	5967.9
67.5°	5784.7	5795.1	5827.6	5899.5	6000.4	6095.5	6260.2	6484.1	6674.3	6728.8	6582.7
70°	6208.0	6228.9	6285.7	6385.5	6506.1	6655.8	6835.6	7076.8	7292.6	7318.1	7132.5
72.5°	5825.3	5868.2	5969.1	6124.5	6377.4	6643.0	6952.7	7308.8	7618.5	7654.5	7356.4
75°	4672.3	4721.0	4841.6	5012.1	5311.4	5705.8	6153.5	6688.3	7152.2	7211.4	6817.0
77.5°	2490.4	2550.7	2725.9	2955.5	3382.4	3904.4	4443.8	5053.9	5448.3	5581.7	5297.5
80°	627.5	660.0	744.7	879.2	1168.1	1589.1	2054.3	2710.8	3200.3	3407.9	3200.3
82.5°	243.6	267.9	291.1	307.4	335.2	393.2	542.9	885.0	1192.4	1468.5	1271.3
85°	94.0	99.8	143.8	163.6	163.6	179.8	206.5	243.6	301.6	329.4	276.1
87.5°	37.1	40.6	49.9	76.6	78.9	69.6	74.2	83.5	63.8	53.4	60.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1339.7	1339.7	1339.7	1339.7	1339.7	1339.7	1339.7	1339.7
2.5°	1333.9	1332.8	1330.5	1331.6	1330.5	1330.5	1330.5	1330.5
5°	1332.8	1332.8	1330.5	1330.5	1330.5	1331.6	1330.5	1330.5
7.5°	1331.6	1330.5	1328.1	1327.0	1327.0	1325.8	1325.8	1325.8
10°	1329.3	1327.0	1324.7	1323.5	1323.5	1321.2	1321.2	1321.2
12.5°	1335.1	1331.6	1329.3	1328.1	1328.1	1328.1	1329.3	1329.3
15°	1351.3	1344.4	1340.9	1339.7	1340.9	1343.2	1344.4	1345.5
17.5°	1368.7	1361.8	1356.0	1353.7	1354.8	1358.3	1361.8	1364.1
20°	1390.8	1385.0	1378.0	1375.7	1375.7	1380.3	1382.7	1386.1
22.5°	1422.1	1417.5	1411.7	1408.2	1405.9	1411.7	1415.1	1417.5
25°	1472.0	1467.3	1462.7	1459.2	1458.1	1463.9	1466.2	1467.3
27.5°	1538.1	1533.4	1531.1	1530.0	1526.5	1528.8	1532.3	1531.1
30°	1623.9	1627.4	1623.9	1623.9	1618.1	1620.4	1618.1	1615.8
32.5°	1738.8	1735.3	1724.8	1717.9	1709.8	1709.8	1706.3	1702.8
35°	1853.6	1842.0	1836.2	1839.7	1836.2	1838.5	1832.7	1826.9
37.5°	1989.3	1982.3	1981.2	1991.6	1989.3	1991.6	1991.6	1983.5
40°	2169.1	2164.5	2172.6	2190.0	2196.9	2195.8	2198.1	2187.7
42.5°	2375.6	2367.5	2370.9	2386.0	2394.1	2396.4	2395.3	2386.0
45°	2582.0	2584.4	2584.4	2600.6	2608.7	2613.4	2605.2	2601.8
47.5°	2815.2	2818.7	2810.6	2821.0	2823.3	2831.4	2824.5	2818.7
50°	3084.3	3071.5	3053.0	3056.5	3056.5	3054.1	3046.0	3039.1
52.5°	3384.7	3355.7	3320.9	3309.3	3296.6	3283.8	3267.6	3254.8
55°	3726.9	3677.0	3614.4	3585.4	3561.0	3532.0	3494.9	3482.2
57.5°	4123.6	4037.8	3954.3	3902.1	3839.4	3801.1	3753.6	3751.3
60°	4594.5	4478.6	4331.2	4253.5	4190.9	4145.6	4109.7	4095.8
62.5°	5138.6	4939.1	4780.1	4696.6	4623.5	4595.7	4550.5	4556.3
65°	5696.5	5493.5	5339.2	5272.0	5203.5	5185.0	5143.2	5158.3
67.5°	6300.8	6133.8	5964.4	5901.8	5839.2	5820.6	5777.7	5790.5
70°	6842.5	6630.3	6437.7	6314.7	6208.0	6122.2	6067.7	6045.6
72.5°	6950.4	6582.7	6279.9	5972.6	5795.1	5639.7	5575.9	5551.5
75°	6245.2	5674.5	5243.0	4882.2	4682.7	4456.5	4432.2	4398.5
77.5°	4857.9	4208.3	3686.3	3222.3	2954.4	2678.3	2583.2	2511.3
80°	2897.5	2227.1	1726.0	1209.8	987.1	794.6	747.0	697.1
82.5°	1037.0	664.6	447.7	349.1	312.0	287.7	269.1	244.7
85°	250.5	211.1	199.5	181.0	178.6	152.0	107.9	96.3
87.5°	80.0	73.1	74.2	70.8	74.2	55.7	45.2	40.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)